GlassBrowser AI Full Product Spec

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1. Product Overview

GlassBrowser AI is a trading workstation that merges a web browser with an agentic trading desk. It lets a trader analyze markets, backtest strategies, optimize parameters, and execute or monitor trades from a single desktop application. The product targets discretionary traders who want AI-assisted workflows with auditability and automation controls.

2. Core Experience

The left side is a full Chromium browser (for charts, news, or third-party tools). The right side is the Glass trading desk with chat, broker panels, backtester, native charts, and autopilot. A global symbol scope can be set so every panel and agent works on the same instrument and timeframes.

3. Main Panels and What Traders Use Them For

3.1 Chat and Chart Chat

Multi-agent chat with tool execution, team mode, attachments, live voice mode, playbook runs, and run timelines. Chart Chat is optimized for native chart snapshots and multi-timeframe analysis.

- Team roles: Technician, Macro Strategist, Risk Manager
- Symbol scope picker (broker-backed search)
- Tool cards for broker actions, backtests, optimizations
- Playbook/Task tree run status and resume prompts

3.2 TradeLocker Panel

Connects to TradeLocker accounts for live positions, orders, and streams. Shows account metrics, broker status, stream health, and allows manual broker snapshots.

3.3 Native Chart Panel

Internal OHLC chart view with snapshots, multi-timeframe frames, and chart watchers. Used by agents to reason over chart structure and to generate evidence cards.

3.4 Backtester Panel

Runs manual backtests and optimizer sessions against broker history. Provides metrics, trade diagnostics, and can persist winners into the setup library or watch profiles.

3.5 Setups Panel

Manage setup watchers (live, paper, suggest). Watch profiles store strategy params and optional regime constraints. Setup library saves optimizer winners with scores and tiers.

3.6 Autopilot Panel

Central risk and automation controls. Supports Live/Paper/Shadow execution modes, kill switch, per-symbol caps, and playbook execution policies.

3.7 Performance Dashboard

Research autopilot results, regime champions, and trend charts (score, edge margin, drawdown, robustness). Supports exporting sessions and promoting champions to watch profiles.

3.8 Audit, Memory, Notes

Audit Trail logs actions and errors. Agent Memory stores decisions, experiment notes, and test runs. Notes panel is a lightweight trader notebook.

3.9 MT5 Panel

Connects to a local MT5 tick bridge for real-time ticks, symbol lists, and subscriptions.

4. Key Trading Workflows

4.1 Manual Trade Flow

- Set symbol scope and session bias
- Analyze native chart and broker snapshot
- Propose trade via chat
- Confirm and execute (if enabled) with risk gates

4.2 Backtest and Optimize

- Run backtest on broker bars
- Run optimization chain (round 1 + round 2)
- Persist winners, save to library, create watchers

4.3 Research Autopilot

- Start research session with objective preset
- Run multi-experiment chain with robustness checks
- Generate champion and regime champions
- Promote to watch profiles

5. Risk Controls

Risk settings are centralized in Autopilot. Modes (scalper, day, trend, swing) apply default constraints. Caps include max daily loss, risk per trade, per-symbol caps, spread/ATR gates, and kill switch.

6. Data and Memory

The ledger stores trades, memories, backtests, optimizer winners, experiment notes, and playbook runs. This enables replay, audit, and consistent agent context.

7. Agentic Control Model

Agents operate through an Action Catalog and Task Trees. Each action is typed, gated, and auditable. Playbooks define repeatable multi-step workflows. Task Trees enforce order, retries, and dependency checks.

8. Execution Modes

- Live: real broker execution
- Paper: local simulated execution
- Shadow: no execution, but full logging for analysis

9. Current Dependencies

- TradeLocker account for broker integration (requires accNum and JWT auth)
- OpenAI GPT-5.2 for chat and vision
- Optional Gemini API key for voice/TTS
- Optional MT5 bridge for tick streaming

10. Roadmap and Next Additions

Planned improvements focus on deeper event-sourced truth replay, more comprehensive action coverage, refined execution safety, and expanded agent test harness scenarios. The goal is a fully auditable, replayable, and autonomous trading system with human override at every stage.

- Truth ledger replay UI and run timeline improvements
- Idempotent execution and kill-switch enforcement at the broker gate
- Expanded scenario library for agent test harness
- Shadow mode stats by regime and session